REMARKS

The present application was filed on December 21, 2001 with claims 1-15. Claims 1-11 and 13-15 remain pending. Claims 1, 14 and 15 are the pending independent claims.

Claims 1-11 and 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,219,352 (hereinafter "Bonomi") in view of Donald E. Knuth, The Art of Computer Programming (2d ed. 1973) (hereinafter "Knuth").

In this response, Applicants traverse these rejections and respectfully request reconsideration of the present application.

The Examiner's argument that the combination of Bonomi and Knuth teaches the limitations of claim 1 regarding the use of a circularly linked list is based on his contention, found on page 5 of the final Office Action, that although "Bonomi does not expressly disclose a circularly linked list, however, it would have been obvious to modify the teachings of Bonomi use [sic] a circularly linked list as disclosed in Knuth for the reasons disclosed in Knuth and as is well known in the art by those of ordinary skill."

Applicants respectfully submit that the proffered motivation for combining or modifying the combination of Bonomi and Knuth is deficient. The Federal Circuit has stated that when patentability turns on the question of obviousness, the obviousness determination "must be based on objective evidence of record" and that "this precedent has been reinforced in myriad decisions, and cannot be dispensed with." In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Moreover, the Federal Circuit has stated that "conclusory statements" by an examiner fail to adequately address the factual question of motivation, which is material to patentability and cannot be resolved "on subjective belief and unknown authority." Id. at 1343-1344.

Applicants contend that, rather than providing motivation for combination with Bonomi, Knuth merely recites some general advantages of a circularly linked list as an abstract data type; see, for example, the statement on page 270 that "a circular list . . . has the property that its last node links back to the first instead of to Λ. It is then possible to access all of the list starting at any given point; we also achieve an extra degree of symmetry, and if we choose we need not think of the list as having a 'last' or 'first' node." Nowhere does Knuth teach or even suggest the use of a circular linked list for storage of multicast groups. This is unsurprising in light of the fact that Knuth, as cited by the Examiner, is a 1973 revision of a 1968 book, whereas the concept of multicast groups in the Internet Protocol context was not proposed until more than a decade

later. See, for example, D.R. Cheriton & S.E. Deering, IETF RFC 966: Host Groups: A Multicast Extension for Internet Protocol, December 1985, http://tools.ietf.org/html/rfc966.

Applicants further contend that Examiner's statement that the modification would have been obvious "as is well known in the art by those of ordinary skill" is precisely the sort of conclusory statement addressed by MPEP 2143.01(iv), which states as follows, with emphasis supplied:

> A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.).

It should be noted that the techniques disclosed in the present application have a number of advantages over the conventional methods disclosed in Bonomi, as discussed in Applicants' specification at, for example, page 8, lines 21-30:

> The use of a circular multicast list according to the present invention significantly reduces the memory storage requirements at the network processor, as compared with the prior art. Only a single circularly linked list is required for each multicast group, with the entry point determining the group member to skip or omit from the group for the multicast session. In the prior art, each multicast group list is linearly linked and therefore must be replicated a number of times equal to the number of entries in the list, with each list replication omitting one group member, which does not receive a copy of the multicast packet.

Applicants note that Bonomi was filed in 1997 and Knuth published in 1973. Applicants respectfully submit that the failure of other researchers in this field of endeavor to render the allegedly obvious invention disclosed in the present application during the long period during

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which both references were publicly available and well known to those skilled in the art constitutes objective evidence of non-obviousness and only further lends support for the patentability of the present invention.
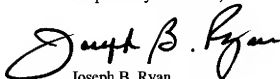
More generally, these other researchers have presumably been aware of the existence of both circularly linked lists and multicast groups for at least two decades, since the introduction of the above-cited RFC 966 reference in 1985. One cannot help but wonder why these other researchers have heretofore failed to use a circularly linked list for multicast groups, despite the considerable advantages that Applicants have determined result from such an arrangement. The answer is that these other researchers, although presumably aware of the existence of both circularly linked lists and multicast groups, never thought to put the two separate ideas together in the manner disclosed by Applicants, and hence have been unable to achieve the associated advantages. In formulating the §103(a) rejection, the Examiner is using improper hindsight, based on the benefit of access to the disclosure of Applicants, to make a connection that those skilled in the art have clearly been unable to make.

Independent claims 14 and 15 as previously amended include limitations similar to those of claim 1, and are therefore believed allowable for reasons similar to those described above with reference to claim 1.

Dependent claims 2-11 and 13 are believed allowable for at least the reasons identified above with regard to claim 1. Additionally, one or more of these dependent claims are believed to define separately-patentable subject matter.

In view of the foregoing, claims 1-11 and 13-15 are believed to be in condition for allowance.

Respectfully submitted,

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